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A-3

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/334,193 06/16/99 O'SHAUGHNESSY

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IM22/1218

EXAMINER

MIRANDA, L

ART UNIT

PAPER NUMBER

1775

DATE MAILED:

12/18/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/334,193

Applicant(s)

O'SHAUGHNESSY, DENNIS J.

Examiner

Lymarie Miranda

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 and 36-43 is/are pending in the application.
- 4a) Of the above claim(s) 35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-34 and 36-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-34 and 36-43, drawn to coated article, classified in class 428, subclass 432.
 - II. Claim 35, drawn to a method of making a coated article, classified in class 65, subclass 54.
2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process, such as a method that instead of applying a coating, uses layers of laminates of the filler material to fill in the space between glass sheets.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.
5. During a telephone conversation with Kenneth Stachel on 9/28/2000 a provisional election was made with traverse to prosecute the invention of group I, claims

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1-34 and 36-43. Affirmation of this election must be made by applicant in replying to this Office action. Claim 35 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-34 and 36-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glaverbel (GB 2311540) and Gillery (US 4610771)

Glaverbel discloses a coated sheet comprising a transparent substrate carrying two metal layers formed of silver or silver alloy and three layers of a transparent dielectric non-absorbent material (page 4, lines 13-24).

Suitable non absorbent materials include oxides such as tin oxide and zinc oxide, nitrides such as silicon nitride or a mixture thereof or a complex of non-absorbent materials such as zinc stannate. Each complete non-absorbent layer can include more

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than one of these materials and each layer can be a composite layer formed of successive subsidiary layers of different composition from each other, for example a zinc oxide layer split into two or more sub-layers of another non absorbent material. (page 7, lines 9-20).

The reference also disclose that a combination of tin oxide and zinc oxide is generally advantageous, whether in admixture or in successive sub-layers. The coated substrate may further comprise a thin layer of sacrificial material provided above and in contact with each metal layer. Suitable sacrificial metals include titanium and zinc (page 7, lines 24-33).

The coating layers may be completed with a protective layer that shields the coating without changing its optical properties. Suitable materials for the protective layers are oxides, nitrides and oxy-nitrides of silicon (page 8, lines 20-25).

Regarding claims 32 and 33~~6~~, as stated in page 1 lines 1-7 the coated transparent sheet is used for vehicle windows.

Regarding claim 34, the reference discloses that the glass assembly comprises two or more laminated sheets (page 2, lines 13-21).

Regarding claim 21, Glaverbel discloses a laminated assembly where the metal layers have a thickness between 16.5-22 nm and the non-absorbent layers have a thickness between 220-260 nm (page 4, lines 32-36). The sacrificial layer has a thickness around 15 nm (page 7, lines 34-36). The reference does not expressly disclose the use of two protective films. However, in absent evidence of its criticality no patentable distinction is seen, since it would a matter of design choice.

Glaverbel fails to disclose the exact thickness ranges for the layers. It would have been obvious to one having ordinary skill in the art at the time the invention was made to select the disclosed ranges, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Glaverbel fails to disclose the zinc stannate film has a composition of 10-90 weight % of zinc and 90-10 weight % of Tin. However, Gillery discloses a film composition comprising multiple layers, preferably a highly reflective film such as gold, silver and copper sandwiched between metal oxide layers. The anti-reflection layer comprises a metal oxide, which is preferably zinc stannate (col. 3, lines 25-32). The zinc stannate film has a composition of preferably 10-90 percent zinc and 90-10 percent tin, where a zinc/tin ratio from 40:60 to 60:40 is preferred (col. 4, lines 2-7).

At the time the invention was made it would have been obvious to someone of ordinary skill in the art to use the zinc stannate composition of Gillery to make Glaverbel zinc stannate film. The suggestion/motivation would have been to produce a higher transmittance film.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lymarie Miranda whose telephone number is (703) 308-6370. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (703) 308-3822. The fax phone

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numbers for the organization where this application or proceeding is assigned are 305-3599 for regular communications and 305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 306-0661.



LM

December 13, 2000



DEBORAH JONES
SUPERVISORY PATENT EXAMINER